Amendments to the Claims

The following claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ comprising the nucleotide sequence of SEQ ID NO: 1, or a degenerate variant of SEQ ID NO: 1.

2. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ comprising the nucleotide sequence of a β-amyloid peptide-binding protein (BBP) ~~and~~ of clone BBP1-fl deposited under accession number ATCC 98617, or a degenerate variant of said sequence.

3. (canceled)

4. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ comprising the nucleotide sequence of SEQ ID NO: 1 from nucleotide 202 to nucleotide 807, or a degenerate variant of said sequence.

5. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ comprising the nucleotide sequence of SEQ ID NO: 1 from nucleotide 1 to nucleotide 201, or a degenerate variant of said sequence.

6. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ comprising the nucleotide sequence of a β-amyloid peptide-binding protein (BBP) of clone pEK196 deposited under accession number ATCC 98399, or a degenerate variant of said sequence.

7. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ encoding a β-amyloid peptide-binding protein (BBP) encoded by the cDNA insert of clone pEK196 deposited under accession number ATCC 98399, or a degenerate variant of said sequence.

8. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ encoding a protein comprising the amino acid sequence of SEQ ID NO: 2.

9. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ encoding a protein comprising a fragment of the amino acid sequence of SEQ ID NO: 2 having human β-amyloid peptide binding activity, the fragment comprising the amino acid sequence from amino acid 68 to amino acid 269 of SEQ ID NO: 2

10. (currently amended) An isolated, recombinant or chemically synthesized nucleic acid ~~A nucleic acid~~ capable of hybridizing under ~~stringent conditions~~ a stringent condition to a polynucleotide or the complement thereof, said polynucleotide being ~~of a polynucleotide~~ selected from the group consisting of:

a) a polynucleotide consisting of the nucleotide sequence of SEQ ID NO: 1, or a degenerate variant of SEQ ID NO: 1;

b) a polynucleotide consisting of the nucleotide sequence of a β-amyloid peptide-binding protein (BBP) ~~and~~ of clone BBP1-fl deposited under accession number ATCC 98617, or a degenerate variant of said sequence;

c) a polynucleotide encoding a β-amyloid peptide-binding protein (BBP) encoded by the cDNA insert of clone BBP1-fl deposited under accession number ATCC 98617, or a degenerate variant of said sequence;

d) a polynucleotide consisting of the nucleotide sequence of SEQ ID NO: 1 from nucleotide 202 to nucleotide 807, or a degenerate variant of said sequence;

e) polynucleotide consisting of the nucleotide sequence of a β-amyloid peptide-binding protein (BBP) of clone pEK196 deposited under accession number ATCC 98399, or a degenerate variant of said sequence;

f) polynucleotide encoding a β-amyloid peptide-binding protein (BBP) encoded by the cDNA insert of clone pEK196 deposited under accession number ATCC 98399, or a degenerate variant of said sequence;

g) a polynucleotide encoding a protein consisting of the amino acid sequence of SEQ ID NO: 2; and

h) a polynucleotide encoding a protein consisting of a fragment of the amino acid sequence of SEQ ID NO: 2 having human β-amyloid peptide binding activity, the fragment consisting of the amino acid sequence from amino acid 68 to amino acid 269 of SEQ ID NO: 2

wherein said stringent condition is selected from the group consisting of conditions A to R of Table 1 ~~wherein the nucleic acid is also capable of hybridizing under stringent conditions to a polynucleotide or the complement of a polynucleotide consisting of the nucleotide sequence of nucleotides 1-201 of SEQ ID NO: 1, or a degenerate variant thereof~~.

11. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ encoding a peptide comprising the amino acid sequence of SEQ ID NO: 2 from amino acid 1 to amino acid 67.

12. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ according to claim 11 wherein the sequence is the nucleotide sequence of SEQ ID NO: 1 from nucleotide 1 to nucleotide 201.

13. (withdrawn) A probe or primer capable of hybridizing under stringent conditions to the polynucleotide according to claim 11 or the complement of said polynucleotide.

14. (withdrawn) A probe or primer according to claim 13 further comprising the nucleotide sequence of nucleotides 157-201 of SEQ ID NO: 1.

15. (withdrawn) A probe or primer according to claim 13 further comprising the nucleotide sequence of nucleotides 172-194 of SEQ ID NO: 1.

16. (currently amended) An isolated, recombinant or chemically synthesized polynucleotide ~~A polynucleotide~~ comprising at least one expression control sequence operably linked to at

least one polynucleotide selected from the group consisting of the polynucleotides of claims 1 to 9 and the nucleic acid of claim 10.

17. (original) A host cell transformed with the polynucleotide of claim 16.

18. (original) The host cell of claim 17 wherein said cell is a prokaryotic or eukaryotic cell.

19. (new) An isolated, recombinant or chemically synthesized polynucleotide comprising a nucleic acid sequence encoding amino acids 123-202 of SEQ ID NO:2, or the complement of said nucleic acid sequence.

20. (new) The polynucleotide of claim 19, wherein said nucleic acid sequence encodes amino acids 68-202 of SEQ ID NO:2.

21. (new) An expression vector comprising the polynucleotide of claim 19.

22. (new) An isolated, recombinant or chemically synthesized polynucleotide comprising a nucleic acid sequence encoding amino acids 185-217 of SEQ ID NO:2, or the complement of said nucleic acid sequence.

23. (new) An expression vector comprising the polynucleotide of claim 22.

24. (new) An isolated, recombinant or chemically synthesized polynucleotide comprising a nucleic acid sequence encoding amino acids 65-175 of SEQ ID NO:2, or the complement of said nucleic acid sequence.

25. (new) An isolated, recombinant or chemically synthesized polynucleotide comprising a nucleic acid sequence or the complement thereof, wherein said nucleic acid sequence encodes amino acids 123-202 of SEQ ID NO:2 with an arginine to glutamate substitution at residue 200.

26. (new) The polynucleotide of claim 25, wherein said nucleic acid sequence encodes amino acids 68-269 of SEQ ID NO:2 with said arginine to glutamate substitution at residue 200.

27. (new) An expression vector comprising the polynucleotide of claim 25.

28. (new) An isolated, recombinant or chemically synthesized polynucleotide comprising a nucleic acid sequence or the complement thereof, wherein said nucleic acid sequence encodes a β-amyloid peptide-binding protein comprising amino acids 123-202 of SEQ ID NO:2 with one or more amino acid residue modifications, and wherein said β-amyloid peptide-binding protein is incapable of sensitizing human Ntera2 cells to β-amyloid peptide, or has an attenuated effect on sensitizing human Ntera2 cells to β-amyloid peptide compared to the same β-amyloid peptide-binding protein but without said one or more amino acid residue modifications.

29. (new) The polynucleotide of claim 28, wherein said β-amyloid peptide-binding protein comprises amino acids 68-269 of SEQ ID NO:2 with said one or more amino acid residue modifications.

30. (new) An expression vector comprising the polynucleotide of claim 28.

31. (new) An isolated, recombinant or chemically synthesized polynucleotide capable of hybridizing under a stringent condition to a nucleic acid sequence or the complement thereof, wherein said nucleic acid sequence consists of SEQ ID NO:1, and wherein said stringent condition is selected from the group consisting of conditions A to R of Table 1.

32. (new) The polynucleotide of claim 31, wherein said stringent condition is selected from the group consisting of conditions A to L of Table 1.

33. (new) The polynucleotide of claim 31, wherein said stringent condition is selected from the group consisting of conditions A to F of Table 1.

34. (new) A recombinant vector comprising the polynucleotide of claim 31.

35. (new) An isolated, recombinant or chemically synthesized polynucleotide capable of hybridizing under a stringent condition to a nucleic acid sequence or the complement thereof, wherein said nucleic acid sequence consists of a degenerate variant of SEQ ID NO:1, and

wherein said stringent condition is selected from the group consisting of conditions A to R of Table 1.

36. (new) An isolated, recombinant or chemically synthesized polynucleotide comprising a nucleic acid sequence encoding a β-amyloid peptide-binding polypeptide which has at least 95% sequence identity to amino acids 123-203 of SEQ ID NO:2.

37. (new) An isolated, recombinant or chemically synthesized polynucleotide comprising a nucleic acid sequence encoding a β-amyloid peptide-binding polypeptide which has at least 60% sequence identity to amino acids 123-203 of SEQ ID NO:2.